

After Action Review Report

First Draft

Prepared for:



Prepared by:



Acronyms

AM Area Manager

ASC Advocacy for Social Change

BBC British Broadcasting Corporation

BDC BRAC District Coordinator

BDEA Bangladesh Digital Ecosystem Activity

BDRC Bangladesh Red Crescent

BDT Bangladesh Taka

Bn Billion

BRAC Bangladesh Rural Advancement Committee

CHW Community Health Worker
CW Consultative Workshop

DM District Manager ER Expected Result

FGD Focus Group Discussion
KII Key Informant Interview

LICT Leveraging Information and Computer Technology

MEL Monitoring, Evaluation & Learning

Mn Million

SK Shastho Kormi SS Shastho Shebika TOT Training of Trainers

TV Television
UN United Nations

UNDP United Nations Development Programme

USAID United States Agency for International Development

USD United States Dollar

About BRAC

BRAC (Bangladesh Rural Advancement Committee) is a leading non-government organization (NGO), with the mission to empower people and communities in circumstances of poverty, illiteracy, disease, and social injustice. It was founded in 1972 through the initiation of small-scale rehabilitation projects, in response to humanitarian needs of refugees returning home post-liberation war. Today, BRAC has emerged as a forerunner in the field of development cooperation with its values of integrity, innovation, inclusiveness, and effectiveness. With socio-economic empowerment as its cornerstone, BRAC focuses on projects targeted at eradication of extreme poverty, expansion of financial choice through microfinance, gender equality, access to healthcare, climate emergencies and investment in the next generation through skill development and education.

Disclaimer

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The contents of this work are intended for BRAC to use as a blueprint to assess the overall performance of the USAID Bangladesh Digital Ecosystem Activity project and develop specific intervention strategies to improve the data tree and rumor map model. Done right, BRAC intends to support government agencies to be better equipped in providing well-coordinated information across all platforms in the future. This document is not intended to constitute legal, securities, or investment advice.

The research was commissioned in January 2021. All data collection for this study have been conducted in a way that is compliant with the COVID-19 health protocol. Each respondent received background information on the study prior to the interview and was encouraged to give open and honest answers.

February 2021

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1. Executive Summary

As the digital era continues to envelope all sectors of a developing Bangladesh, the ability to identify and address the spread of misinformation becomes a key priority. Rumors, fake news, disinformation — broadly being categorized as misinformation — become increasingly prevalent as more of the population engages with both traditional and modern channels of communication. In particular, the high population density, increasing digital penetration and relatively low digital literacy rates in Bangladesh have catalyzed this concern. In this regard, the digital ecosystem activity undertaken by BRAC to map and combat misinformation regarding COVID-19 provides a unique and effective three-step solution to this issue:

- Collect data regarding misinformation in various districts across Bangladesh
- Analyze and visualize that data using the data tree (data analysis tool) and the rumor map (visualization tool)
- Develop and deploy data-driven policy and targeted communications campaigns using the insights gathered from the data collection and analysis process

Upon thorough review of the digital ecosystem activity, various successes and challenges have been identified; many of which have helped highlight a need for this project in the immediate future and aided in developing a promising way forward.

Four key successes in data collection and analysis:

1) Development of a unique set of tools and processes

- i. Development of the data tree and rumor map has provided a framework to help achieve proper capture and storage of data, enabled the development of various analyses (dependent on captured data) and facilitated the visualization of various types of information across studied areas (to provide macro and micro insights, i.e. to aid policy).
- ii. **Introducing the digital devices as a tool** for data collection played a significant part in the project's success in by reducing long-term cost of data collection and possibility of error within a short duration. It has also increased oversight capacity of managers and ensured quicker upload to BRAC's main database

2) Leveraging BRAC's strength – its network

Choosing BRAC as the implementing partner of this project provided the benefit of being able to leverage its vast and robust network of on-the-ground coordinators, managers and workers. This helped in four ways: The workers engaged in data collection were locals of the areas they surveyed, resulting in greater trust and transparency from respondents. BRAC's reputation and goodwill across the districts surveyed provided further assurance with regard to access and transparency from respondents.

3) Effective and efficient training for SKs conducting the survey

The SKs received training in two key fields:

- i. Training to operate the digital device the digital devices provided to SKs to collect and record information greatly improved the efficiency and effectiveness of the data collection process in comparison to traditional data collection methods (i.e. pen and paper, which would then have to be transcribed digitally). SKs reported few issues in using these devices, even less so as the project developed.
- ii. **Enumerator training** the enumerator training was a vital capacity building exercise for the BRAC team as it allowed them to transform and leverage their vast health team on the ground to become data collectors. This allowed the BRAC team to leverage the 2,652 strong SK team (many of whom were familiar with the data collection process) to become enumerators over the course of one month.

4) Development and implementation of an effective communications campaign

Between the four major channels used to disseminate information, the successes can be split into their effectiveness by information reach and by information recall.¹

	Miking	Various Digital Media	Various Materials	Door-to-Door
Reach	Medium	High	Low	Medium
Recall	Medium	Medium	High	High

Through this analysis, it became clear that door-to-door and leveraging digital media to disseminate information showed the greatest promise for both reach and recall. In particular, door-to-door was more effective among rural populations and the digital media channels can yet be developed to provide more value.

Four key challenges in data collection and analysis:

1) Research sampling controls can improve ability to draw inferences

With over 240,000 responses and over 1,000 responses for each district surveyed, there was extensive coverage across the various divisions and districts of Bangladesh. **The specific sampling method, however, could be improved to ensure the data collected is truly representative of the larger populations** (be it on a local or national scale). Two pitfalls were identified in this regard:

i. **Lack of randomized data collection** – randomized groups would eliminate or reduce bias in sampling. Due to the targeted nature of data collection, i.e. going to specific households, villages, areas, there may be some bias in sampling.

¹ **Reach** – refers to the number of people the campaign can reach. **Recall** – refers to the ability of beneficiaries of a campaign to recall/recollect information disseminated through that campaign.

ii. **Developing a longitudinal approach** – to monitor the change of samples/populations over time, a longer-term data collection campaign could provide a clearer picture of the spread and attitudes toward COVID-19 related information. Having collected data within a two-month period, the samples may not be representative of the population as it changed over time.

2) Ensuring further data collection quality and accuracy

To ensure consistency and accuracy in the data collection process, it is imperative to both set standardized methods of data collection and adhere to strict oversight and incentive managements procedures.

- i. Varying methods of data collection anecdotal evidence (through the FGDs) suggest that different SKs followed different methods of data collection. These differences were observed within and between districts². This happened in mainly two ways data collection varied in time required resulting in varying depth of data collection; and varying type and depth of questioning resulting in potential for bias in some samples.
- ii. **Oversight and incentives for data collection** the early stages of the data collection process brought forth some issues regarding proper oversight and incentive management for data collection. These included a small portion of false reporting and a change in the oversight and incentive management process.

3) Structuring the questionnaire to capture contextual data

The questionnaire, while designed to be short and easy to deploy, had a few pitfalls. Largely, these can be divided into the following ways:

- i. **Lacking contextual data** to capture channel-related, and differences in hearing and believing various information. This data would further aid in performing analyses for targeted intervention.
- ii. **Gathering further demographic/psychographic data** including details such as smartphone use, social media use, household size; which were not captured in the existing questionnaire.
- iii. **Gauging effective/prevalent channels of information.** This data (not captured in the existing questionnaire) regarding the most prevalent channels for various types of information/misinformation could lead to a potent analysis of the spread of misinformation as well as provide a segmentation of that spread.

4) External challenges

As with any data collection or communications project, a few external challenges were briefly mentioned during the interviews with the BRAC teams and project respondents. Largely, these were related to time constraints and area-specific issues.

² FGDs with Rangpur, Chattogram, Manikganj respondents, SKs, AMs, BDCs – 21st to 27th January, 2021

- COVID-19 made travel difficult and respondents reluctant COVID-19 restrictions provided several obstacles for data collection and information dissemination; particularly through lockdown, health risks, and respondents' reluctance.
- Request to omit questions from the questionnaire some questions were asked to be removed from the questionnaire by local representatives. These were mostly focused on religious sentiments.
- iii. **Time constraint** due to the short and unique nature of the project, the time constraint was cited by all BRAC teams as a major issue. The data collection process lasted for one month and therefore did not cover a longitudinal analysis of the data.

Highlighting the key recommendations:

1) Further training for BDCs, AMs, and SKs

- i. BDCs should have access to the dashboard and have constant contact with the communications, health, data, and other BDC teams
- ii. AMs should have training regarding mass data collection best practices and identifying data quality issues
- iii. SKs should have training regarding best practices in data collection, recording and questioning.

2) Data collection considerations

- i. Develop a dedicated monitoring and evaluation team for data collection by leveraging the existing BDCs and AMs in this endeavor while also tying incentives to data quality as opposed to data collection. Periodic reviews and training sessions during data collection could minimize risk.
- ii. **Capturing contextual data should be made a priority in upcoming iterations of the program** by segmenting misinformation by demographics and gauging prevalence of misinformation by channels and demographic groups.
- iii. **Longitudinal data collection should be made a priority for follow up studies** by comparing baseline vs. end-line status to gauge differences before and after the communications campaigns. Performing a periodic/time-series study will ensure the supply of real-time data and enable designing more flexible communications campaigns.
 - 3) Adapt the existing tools to fit future needs To implement a similar mechanism for in the future particularly for the vaccine rollout, development of a COVID-19 vaccine misinformation questionnaire is a prerequisite. Training and development of the enumerators will further help BRAC to devise intervention strategy.
 - **4) Develop targeted communications campaigns** communications campaigns should take into consideration by highlighting –
- Gender-based differences in misinformation Identify and address the prevalence of various channels among different genders while also assessing differences in belief or susceptibility to misinformation

- ii. **Age-based differences in misinformation -** Identify and address the prevalence of digital channels and leverage them to reach the youth while also determining effective channels to reach adult and elderly populations.
- iii. **Urban vs. rural differences in misinformation -** Identify, various channels among urban and rural populations and devise ways address misinformation within occupational classes

5) Further leveraging digital media

- i. Develop further communications through television; specifically targeting rural, peri-urban and middle-class populations
- ii. Develop Facebook, YouTube and other prevalent online media channels as core information dissemination and moderation platforms

2. Introduction to USAID Bangladesh Digital Ecosystem Activity – Mapping COVID-19 Information in Bangladesh

2.1 Overview of USAID Bangladesh Digital Ecosystem Activity

The response to COVID-19 in Bangladesh, and indeed around the world, has largely been centered around the dissemination of relevant and accurate information. Moreover, the rapid digitization of Bangladesh has provided a platform to achieve this agenda as well as made it increasingly difficult to locate and address the sources and spread of misinformation. Several factors have made this challenge especially difficult; poor digital literacy, narrow channels for information dissemination, and an overall unfamiliarity with the way information is spread and consumed in the modern era are chief among these factors.

As a guide, **USAID** proposed three key outcomes of this project listed as Expected Results (ERs):

Expected Result	Description
ER 1	Digital tools and applications deployed enhancing the reliability of online data collection and public information on COVID-19 in Bangladesh
ER 2	Networks or forums improved or created, enhancing the reliability of online data collection and public information on COVID-19 in Bangladesh
ER 3	Ensure government agencies are better equipped to provide well-coordinated information across all platforms.

Table 1: Expected Results as set out by USAID

To better understand the issue BRAC would tackle, the **various types and effects of misinformation** were identified and grouped according to the following:

Disinformation	Misinformation	Rumors	Fake News
• False	• False	 May or may not be true 	• Masked as news
 Created with the intention of causing harm 	 Created with the intention of causing harm 	 Unverified information which misleads 	 Get viral through news media and social media³

In sum, to combat the spread of various types of misinformation and rumors among the mass population, USAID sponsored BRAC in their effort to map the spread of COVID-19 related information and address the misinformation with relevant and accurate facts, figures and materials. From this, the central aim of

³ USAID, BRAC – Stemming misinformation in the digital ecosystem & addressing need for information in a crisis setting

the project was to "enhance COVID-19 response by rapidly strengthening the digital space to provide reliable information for the general public". Out of this, **BRAC leveraged their extensive on-the-ground network and developed a unique tool (the Rumor Map) and several supporting tools, processes, and channels.**

2.2 The Policy Premise – Why Map COVID-19 Misinformation?

Under the directive of the Government of Bangladesh (as part of the Prime Minister's 31 points), four key responses were identified to address the spread of both COVID-19 and associated misinformation:

- 1) To communicate critical risk and event information to the communities and counter misinformation
- 2) Monitor and proactively address rumors and misinformation
- 3) Counter misinformation on all relevant channels, including those channeled through social media and traditional media
- 4) Monitor rumors and misinformation regularly and respond immediately to fake news through multiple channels, particularly through social media

Two Potential Harms of Misinformation

1) Misinformation can jeopardize a positive response

 People's belief: poor cannot get infected/Muslims cannot get the virus – this led to carelessness among those who believed these rumors and increased the spread of the virus, thereby undermining the COVID-19 response

2) Misinformation can lead to exploitation

- i. The belief that ginger-garlic tea prevents COVID-19 resulted in the increase in price of ginger
- ii. Doxycyline (an antibiotic associated used to treat conditions including bacterial pneumonia) saw a price increase
- iii. Poultry and fish farmers lost business due to the spread of rumors and associated demand loss

Understanding these harms (observed on the field) provides an important perspective on why understanding and mapping the spread of COVID-19 misinformation is a valuable proposition. Undertaking these responses required a coordinated approach on the ground with a robust capacity to monitor the spread of COVID-19 related misinformation in Bangladesh. As such, the BDEA (BRAC Digital Ecosystem Activity) provided a potential solution to that undertaking. By leveraging

What Policy Tools Can We Utilize?

Several policies and facilities are relevant in creating an environment to deter the spread of COVID-19 misinformation. The following table highlights the relevant policies and their value in tackling the spread of misinformation.

Act/Policy	Relevant Section	Legal Facilities	Impact
Digital Security Act 2018	Clause 25. Transmission, publication, etc. of offensive, false or threatening data-information.	This clause provides several facilities to litigate against those that willingly or knowingly spread or cause to spread false data or information. This includes up to 3 years imprisonment or a fine up to 3 lac BDT.	To deter the spread of misinformation, this act provides significant disincentive to spread misinformation both directly and indirectly. This is directly applicable to the spread of false COVID-19 information.
ICT Act, 2006	Section 57. Deliberate publishing or transmission of fake and obscene information, such as to tend to deprave and corrupt persons, to deteriorate or create possibility to deter law and order, prejudice the image of the state or person or causes to hurt or may hurt religious belief or instigate against any person or organization.	This clause provides further legal claim against those who willingly or knowingly spread or cause to spread false data or information. This includes up to 10 years imprisonment and up to 1 crore BDT.	To deter the spread of misinformation specifically against misinformation that causes to deter or deteriorate law and order and/or prejudices image of the state or religious belief. This deters the undermining of the COVID-19 response.
The Penal Code, 1860	Section 505. Statements conducing to public mischief. (b) intent to cause or which is likely to cause, fear or alarm to the public (c) intent to incite or which is likely to incite any class or community of persons to commit any offence against any other class or community (d) intent to create or promote, or which is likely to create or promote, feelings of enmity, hatred or ill-will between different communities, classes or sections of people	This section provides several facilities to litigate against misinformation conducive to public mischief and associated incitement of commit offences against public order or other communities. This includes up to two years of imprisonment and or a relevant fine.	To deter the spread of misinformation specifically conducive to public mischief and undermining of public order. This provides facilities to deter the spread of COVID-19 misinformation that undermines the response from the government or other organizations.

Table 2: Relevant policies and their impact on deterring COVID-19 misinformation⁴

Given these policies and facilities from the government to deter the spread of misinformation, several concerns and challenges for implementation arise.

- 1) Rumor/misinformation/disinformation/mal-information are not clearly defined
- 2) No co-ordination among agencies dealing with relevant policies and their implementation
- 3) Rumors spread from abroad through social media
- 4) Media maintains extra cautions to publish various news due to policies discussed
- 5) Abuse of laws and use of fake news is a possibility

⁴ Naharin Rahman Swarna – USAID/BRAC Bangladesh Digital Ecosystem Activity for COVID-19 Response

2.3 BRAC Rumor Map and Data Tree

The chief outcome of the USAID-BRAC Digital Ecosystem Activity project has been the development of the Rumor Map. This unique tool provides a mapping of the most common types of misinformation regarding COVID-19 in Bangladesh, across 40 districts. The data collected by BRAC's extensive on-the-ground network involving over 2000 Community Health Workers (CHWs) locally known as Shastho Kormi (SK), and BDCs and over 240,000 respondents and beneficiaries formed the foundation of this tool. Leveraging this network and the extensive data collected through it, BRAC was able to produce a mapping of the spread and depth of misinformation regarding COVID-19 in Bangladesh. **Culminating in the following map:**

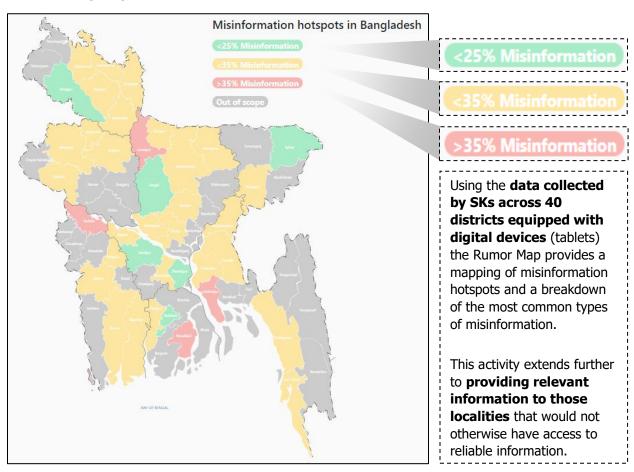


Figure 1: USAID-BDEA Rumor Map - Mapping COVID-19 Misinformation in Bangladesh

The data groupings (<25%, <35%, >35% Misinformation) provide an insight into how many respondents agreed to hearing various types of information related to COVID-19. These include the common misinformation and misconceptions listed in the survey. **The above map can be accessed online by clicking** here⁵

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⁵ USAID, BRAC – Rumor Map, USAID Bangladesh Digital Ecosystem Activity

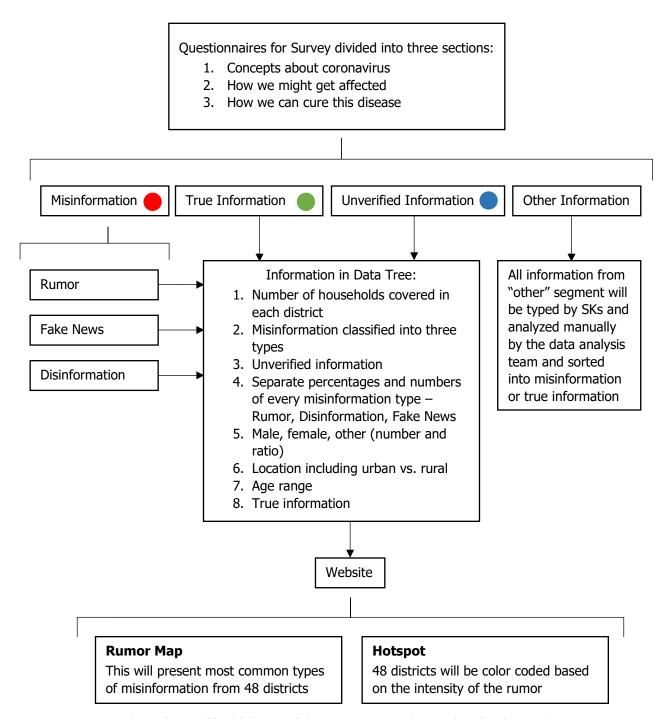


Figure 2: Data analysis plan and highlighting of the Data Tree – a key tool in developing the rumor map

To process the information and extract meaningful insights (i.e. to produce the information displayed in the rumor map) the BRAC team followed a multi-step data analysis plan (the above diagram). It provides an overview of how the rumor map was developed and highlights a core component of the project – the Data Tree – a repository of all the data collected, allowing for processing and analyzing as needed by the BRAC team.

In brief, the data collected on-the-ground feeds into a categorization process. This categorizes the information, based on previously determined parameters, into the various types of misinformation that is being observed in the surveys. Finally, this data is used to create a visual representation of misinformation regarding COVID-19 in Bangladesh (the rumor map) and highlight the "hotspots" of misinformation so that relevant authorities can address it on a local/targeted basis.

3. Methodology and Findings

3.1 Assumptions and Methodology of Data Collection

The data collection methodology and process developed emphasized leveraging the core strengths of BRAC. BRAC's ability to utilize its vast network of locations, distribution channels, and most importantly workers, volunteers, and representatives on the ground positioned the organization uniquely in carrying out this project. As such, the data collection process focused on how best to equip the existing workforce (namely the SKs) with the tools and training necessary to collect information effectively and within the given time and resource constraints. For this, the SKs were given and trained to use digital devices (handheld tablets). They used this to access the questionnaire, input responses effectively and efficiently, and automatically upload the data to the BRAC database.

Training and Interface for Data Collection

The training received by SKs consisted of sessions on how to operate the devices, how to use the interface for data collection, and enumerator training (i.e. training for how to deal with respondents, how to ask the questions, how to input the information received). Importantly, the BRAC team on the ground were responsive and effective at carrying out the data collection and few reported issues with using/operating the device provided.

The training formed the early stage of the project, and was structured and implemented as follows:

Building Digital Capacity (Training)						
July	August					
 Two days of training on USAID BDEA app regarding digital and non-digital data collection for BDCs Trained 38 BDCs Shared training modules with BDCs for future reference/use 	 Two days of training for 114 AMs, 34 OTs and 8 DMs, received TOT on USAID BDEA app in 8 sessions Each day had 4 sessions, each were 2 hours long 					

The number of SKs trained in each respective area during the month of August (prior to the start of data collection) is given below:

Area	Barisal	Chattogram	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	Total
Number of SKs trained	349	287	589	293	245	540	349	2,652

The data collection interface was designed to ensure ease of use and was structured as follows:

Page	Description
1. Login	For the SKs to login and identify themselves using their unique mobile number
2. User identification	For the SKs to input their personal information, including their name, division, district and sub-district
3. Respondent identification and information	To identify the respondent/informant, including their name, mobile number, age and gender. Existing respondents' information can be identified using their name and mobile number.
4. Questionnaire	To view and input questions and answers respectively
5. Submission page	To confirm and submit the information collected
Review information and sync status	To review the information given by respondents and check the status of online upload. Green tick indicates upload to BRAC database, red cross indicates not yet upload to BRAC database ⁶

Table 3: Training and interface structure for data collection

Upon review of the data collection methodology process, **a few unstated assumptions and considerations** were identified that formed the basis of the data collection process. This is split into two categories – **Access and Data**):

Category	Assumption	Description
Access	SKs will be able to access the designated localities	The data collection is dependent on the ability to access the area in question. SKs would need to have the support of relevant local leaders, government officials, or any other relevant authority.
Access	Respondents will trust SKs	BRAC representatives, especially SKs, would have to gain respondents' trust to ensure they are willing and able to share relevant information pertaining to the questions asked.
	SKs are not enumerators	Training would have to be provided to workers on-the- ground (as was the case) to ensure they are able to ask and record questions effectively and efficiently.
Data	The survey captures relevant contextual data	The survey design would have to be able to distinguish between what people have heard vs. what they believe.
	The samples are representative of the larger area in question	To ensure the ability to draw statistical inferences, the samples collected would have to be large enough and chosen (either at random or in a controlled manner) from the larger area in question.

Table 4: Understanding the methodological assumptions for data collection and analysis

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⁶ USAID, BRAC – Bangladesh Digital Ecosystem Activity Application User Manual

Access – refers to assumptions to do with access to chosen/proposed areas and willingness of respondents to share information, i.e. access to villages, offices, homes, etc.

Data — refers to assumptions to do with the quality and statistical value of the data collected, i.e. factors that may skew the data, ability to draw inferences, and confounding factors (if any)

3.2 Successes and Opportunities in Data Collection and Analysis

The data collected and analyzed, the tools developed to do so, and the resultant outcomes (the communication campaign) yielded several successes per USAID expectations and various opportunities to sustain those successes to a positive end. These successes are measured against the guiding ERs set out by USAID.

ER 1 - Digital tools and applications deployed enhancing the reliability of online data collection and public information on COVID-19 in Bangladesh

1) Development of a unique set of tools and processes

The BRAC team developed and leveraged two unique tools to analyze and visualize the spread of misinformation in Bangladesh. As discussed in 2.2, **the Data Tree and Rumor Map** developed by BRAC provided a unique and effective way to understand the spread and types of misinformation in Bangladesh. Importantly, **the greatest success in this regard is the way in which these tools can be used to develop and implement targeted policy on a macro and micro scale.**



The Data Tree and Rumor Map – In a broad sense, these tools have provided a framework to help achieve the following:

- i. Ensure proper capture and storage of data
- ii. Develop and produce various analyses (dependent on captured data)
- iii. Visualize various types of information across various studied areas (to provide macro and micro insights, i.e. to aid policy)

Alongside these tools, **the process developed to collect data is uniquely fitted to BRACs core competencies.** By equipping the SKs with digital devices, data collection was made easier (as reported by SKs) and tended to have fewer errors due to the greater oversight capacity that came with the device. Importantly, through the tools and processes developed, the following two successes stood out as noteworthy:



The Data Collection Process – Introducing the digital devices as a tool for data collection played a significant part in the project's success in four ways.

- i. Reduced time and long-term cost of data collection
- ii. Reduced the possibility of error
- iii. Increased oversight capacity of managers
- iv. Provided quicker upload to BRAC's main database.

2) Effective and efficient training for SKs conducting the survey

The SKs received training in two key fields:

- Training to operate the digital device this consisted of being provided with the digital device and receiving a step-by-step breakdown of the data input and review process.
 Importantly, the SKs who were trained in this reported facing no difficulties in using the device, accessing the questionnaire and reviewing the data.⁷
- 2) **Enumerator training** the SKs were given training for how to ask the questions, how to input and upload data into the provided digital devices, and to share information and materials regarding COVID-19 when necessary.

These trainings were coupled with the experience the SKs and other field workers already had as part of the training they receive for other projects. In particular, the 8 SKs present at the FGDs in various districts had experience with BRAC ranging from 3 to 15 years. This experience included having training for various other data collection projects, information dissemination programs, and general acquaintance with the local communities and BRAC work process. Moreover, in total, 38 BRAC district coordinators, 114 area managers, 34 OTs, and 8 district managers were given training (TOT). These training session breakdowns, details, and timelines are provided in section 3.1 under the Training and Interface for Data Collection sub-header).

ER 2 – Networks or forums improved or created, enhancing the reliability of online data collection and public information on COVID-19 in Bangladesh

3) Leveraging BRAC's strength – its network

Availing BRAC's on-the-ground network of SKs, district coordinators (BDCs), area managers (AMs) and overall strength in coordination proved a significant success in a few key ways;



The project was **conceptualized and implemented within a short time- frame** (totaling 8 months) due to the dedicated teams and departments



Trained 2,652 SKs, 38 BDCs, 114 AMs, 34 OTs, and 8 DMs to carry out mass data collection across 40 districts (>240,000 responses logged)



The workers and volunteers tasked with data collection were **locals of the areas** they engaged with, resulting in **greater trust and transparency from**

BRACs reputation and goodwill across the districts surveyed provided further assurance with regard to access and transparency from respondents.

⁷ FGD with BRAC Rangpur BDEA respondents, SKs, AMs, BDCs – 27th January, 2021

4) Development and implementation of an effective communications campaign

The tail-end of the project consisted of a broad communications campaign that would leverage the insights gathered from the available data. In this pursuit, two major successes stood out:

- 1) Reach⁸ various channels (Miking, TV ads, YouTube videos, Flyers, Posters, and Door-to-Door) were used to maximize the potential reach of the information the BRAC team intended to share
- 2) Recall⁹ the various information disseminated by BRAC showed high levels of recall among respondents and SKs, with some channels proving more effective than others. Furthermore, the respondents and beneficiaries of the BRAC communication campaign provided an insight into the effectiveness of the various channels used

	Miking	Various Media	Various Materials	Door-to-Door
Reach	BDCs, AMs and SKs highlighted the impact of miking (a commonly used communication channel in Bangladesh). The reach of miking was particularly high in peri-urban and urban areas where there is a higher density of people	The communications campaign songs and ads by prominent singers and actors such as Quddus Boyati (prior to data collection) and Chanchal Chowdhury. These materials provided reach for the messages the project intended to focus on (due to the popularity of Quddus Boyati and Chanchal Chowdhury among rural and urban populations, respectively)	The BRAC team shared a large portion of the information (as gathered from CDC/WHO guidelines) through leaflets, flyers and posters). Typically, these were handed out during field visits or posted on people's homes (with their permission)	The SKs carrying out field visits, speaking to individuals in their homes, and collecting data formed the greatest asset in terms of information dissemination. Most respondents mentioned that they trust the information disseminated via BRAC and their representatives; even more so than they do other sources of information, i.e. television, Facebook, friends and family
Recall	The prevalence and strength of this channel was particularly great in rural areas where other mass communication channels are unavailable	The rural population recalled the messages (hand-washing practices, disposal of waste, symptoms, etc.) from Quddus Boyati's song effectively	This channel provided strong supporting/reference material for the information respondents had been hearing through other channels	The most effective channel for information dissemination in terms of information recall. Respondents recalled most information as being told to them by SKs or other volunteers from BRAC

Table 5: Gauging effectiveness of the communication campaign through reach and recall

⁸ This assessment was confirmed by speaking to respondents during the scheduled FGDs and KIIs

⁹ This assessment was confirmed by speaking to respondents during the scheduled FGDs

5) Coordination among the various BRAC teams

Importantly, due to the short time frame, uniqueness, and complexity of this project, the coordination among the various BRAC teams was a key factor in the project's overall success. This success factor was highlighted through the communication and coordination through the stages of the project; listed as follows:

Project Phase	Need for Coordination	Teams Involved
Pre-project goal alignment	Prior to the digital ecosystem activity project, the BRAC team had already begun disseminating information regarding COVID-19 as per CDC/WHO guidelines. This consisted of mobilizing BRACs on-theground network in a time in which other NGOs, development groups, and private concerns had paused operations.	BDC, AM, SK, SS, Health, Communications
Project proposal, approval, and conceptualization	The conceptualization phase made considerations for the challenges that would be faced on the ground; these included data collection issues, enumerator training, data analysis and use, and the end outcome.	Health, Communications, Technology, Data, ASC
Data collection and analysis	From concept to implementation, the various BRAC teams involved communicated the intention of the project clearly. The technologies, tools and processes developed helped ensure constant communication and oversight. In particular, this included the oversight measures integrated into the data collection and review interface (shown in section 3.1 under Training and Interface for Data Collection).	BDC, AM, SK, SS, Communications, Technology, Data
Communication campaign	As a result of the data collection and analysis, the communication campaign targeted the different populations surveyed. Moreover, the various communications channels used relied on cooperation between the communications team and the on-the-ground teams.	BDC, AM, SK, SS, Communications, Health

Table 6: BRAC team dependencies throughout the various stages of the project

3.3 Areas for Improvement in Data Collection and Analysis

The USAID BDEA project was truly unprecedented in its terms and scope and thus while successfully achieving some of the most important parameters, there remain some areas which need further improvements. In order to identify the improvement areas and provide concrete recommendations, the USAID-BDEA rumor mapping method has been compared against the Internews Rumor Tracking methodology for humanitarian organizations.

Internews first developed their rumor tracking methodology with financial support from USAID in 2014 in Liberia to address the spread of misinformation during the deadly Ebola outbreak. Since then this guideline has been implemented during humanitarian crises in numerous countries and contexts. There are five key components needed to run a similar project. These five parts are part of a continuous cycle with the community at its heart.



Figure 3: Internews Rumor Tracking Methodology in Humanitarian Context

The methodology used by USAID-BDEA has been compared across the sections and sub-sections of the Internews model below

Steps in Internews			USAID-BDEA's Performance across Areas				Degree of
Rumor Tracking Methodology	Indicators	Sub-indicators		50%	75%	100%	Interventio n Required
1. Understanding	Information ecosystem and	Identify which person(s) the community trust					,
Context & Community	information needs assessments	Assess the channel(s) the community uses					High
	Building the team	Mobilize people with technical skills and credibility to work with the community					
2. Project Planning and	Organigram	Clearly state and allocate roles and responsibility					
Set-up		Protection related complaints					Medium
	Do no harm	Data security					
		Building trust and community relationships					
	Not asking for rumors	Ask open-ended and follow-up questions in a conversational style					
	Language	Use the language the community is most comfortable using					
3. Collecting Rumors	Managing expectations	All team members must understand managing expectation					Medium
	Different methods to collect	Primarily use face-to-face method and complement with other methods (i.e. SMS, local media, TV, social media)					
	Document and analyze	Choose which rumors to answer (most critical)					
4. Analyzing and Fact	community data	Learn from rumor (understanding what caused this and the pattern)					
Checking		Sample community members, government representatives and other stakeholders in a way that is representative of all population					High
	Timeframes for response	Design timely intervention strategy (i.e. campaign)					
5. Sharing Outputs	Different methods to share	Narrowcast targeted response (i.e. miking, advocating through community leaders)					Medium
	answers	Printed posters of flyers					

Figure 4: USAID-BRAC Methodology Comparison with Internews Rumor Tracking Methodology

1) Research sampling controls can improve ability to draw inferences

As a key component of statistical analysis, the sampling method is crucial in the ability to perform meaningful analyses using any given data. While there was extensive coverage across the various divisions and districts of Bangladesh, the specific sampling method could be improved to ensure the data collected is truly representative of the larger populations (be it on a local or national scale). Two pitfalls were identified in this regard:

- Randomized data collection randomized groups would eliminate or reduce bias in sampling.
 Due to the targeted nature of data collection, i.e. the method that was employed going to
 specific households, villages, areas, and skipping houses by a set amount (10 houses as per
 conversations with BDCs), there may be some bias in sampling.
- 2) **Longitudinal data collection** to monitor the change of samples/populations over time, a longer-term data collection campaign could provide a clearer picture of the spread and attitudes toward COVID-19 related information. Having collected data within a two-month period, the samples may not be representative of the population as it changed over time.

2) Ensuring further data collection quality and accuracy

In the early stages of the data collection process – prior to the oversight measures for data collectors – a few quality and accuracy issues had been identified. These issues were identified in two key areas:

- 1) **Varying methods of data collection** anecdotal evidence (through the FGDs) suggest that different SKs followed different methods of data collection. These differences were observed within and between districts¹⁰. This happened in a few ways:
 - i. Data collection varied in time required. Some SKs spent 10 minutes and others spent 30+ minutes collecting data from one household. This is a symptom of the varying standards of data collection. Note, this can also be due to external factors, i.e. respondent reluctance to engage with SKs.
 - ii. **Varying type and depth of questioning.** Some SKs allowed the respondents to fill in the form themselves, while others may have led the conversation resulting in a potential for bias. Essentially, not all data collection, questioning, engagement with respondents, and recording of information occurred in a standardized way.
- Oversight and incentives for data collection the early stages of the data collection process brought forth some issues regarding proper oversight and incentive management for data collection.
 - i. Building oversight capacity into the data collection process¹¹. There were accounts, during the early stages of the project, of erroneous or false data being included into the database. These stemmed from a lack of tracking and managing data collection on a micro-level. This was later addressed by including the information of the

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¹⁰ FGDs with Rangpur, Chattogram, Manikganj respondents, SKs, AMs, BDCs – 21st to 27th January, 2021

¹¹ KIIs with various teams involved in the BDEA

- individual collecting the data and of the respondent. These were then reviewed by BDCs and AMs to follow up on and ensure the data being uploaded to the database were true.
- ii. **Oversight and incentive management went hand-in-hand**¹². The 2,652 SKs involved in collecting data reported completing ~100 surveys with individuals and households. There were, however, some accounts of data being inputted into the database without a survey having taken place. This issue was eliminated with the inclusion of the oversight measures.¹³

3) Structuring the questionnaire to capture contextual data

The questionnaire, while designed to be short and easy to deploy, had a few pitfalls. Largely, these can be divided into the following ways:

- Lacking contextual data the survey provided an insight into what people had heard but did not necessarily make a distinction (in its question design) for what people believed and how deeply they did so.
- **2) Gathering further demographic/psychographic data** to perform further analyses on the prevalence of misinformation, demographic or psychographic data could help in producing a targeted approach to addressing the various types of misinformation being spread. The questionnaire did not include details such as smartphone use, social media use, household size.
- **3) Gauging effective/prevalent channels of information**¹⁴ data regarding the most prevalent channels for various types of information/misinformation could lead to a potent analysis of the spread of misinformation as well as provide a segmentation of that spread.
 - For example, certain districts have high prevalence of TVs in households. Those populations mentioned obtaining a large portion of their information from that channel.
 - Other districts reported higher prevalence of Facebook, family and friends, BRACs representatives, etc. Identifying these channels' prevalence and effect would provide a holistic view of the spread of misinformation regarding COVID-19 in Bangladesh.

4) Timeline, communications and potential for bias

The presence of confounding or bias provoking factors ought to be controlled for any mass data collection project and statistical analysis. One inadvertent potential for bias came in the form of the timeline of the project.

With the arrival of COVID-19 in Bangladesh and the subsequent measures taken, BRAC was the first responder to disseminating necessary information throughout its network. This dissemination program, prior to the BDEA and data collection, reached out to many of the same areas, populations, and households that would later be respondents for the data collection project. As such, **those respondents**

¹³ KIIs with BDCs, Monitoring Team Lead, Data Team Lead

¹² KIIs with BDCs

¹⁴ FGDs with Rangpur, Chattogram, Manikganj respondents, SKs, AMs, BDCs – 21st to 27th January, 2021

who had already received informational materials from BRAC regarding COVID-19 were more likely to show a positive bias regarding which sorts of misinformation they believed. In sum, those respondents were less likely to be prone to misinformation and would their responses would not necessarily reflect the true spread of misinformation without BRACs intervention.

5) Access to dashboards, data, and the developed tools

Greater access to the data collected and dashboards and tools used to analyze and visualize those data were cited as a concern among the teams on-the-ground. Anecdotal evidence collected from the field (FGDs) suggest that BDCs, AMs and SKs did not have access to the rumor map or database after the data collection process¹⁵. This resulted in a disconnect between the intention of the project and the data collection process. Specifically, this meant that the BDCs, AMs and SKs could not act on the data they had collected. This also caused the varying methodologies and approaches to data collection mentioned in the second area of improvement.

6) External challenges

A few external challenges were briefly mentioned during the interviews with the BRAC teams and project respondents. Largely, these were related to time constraints and area-specific issues.

- 1) COVID-19 made travel difficult and respondents reluctant due to the lockdown measures and risk of contracting COVID-19, the data collection process proved more difficult to coordinate and deploy. Specifically, this issue was prevalent during the early stages of the project, through September and October.
- 2) Request to omit questions from the questionnaire some questions were asked to be removed from the questionnaire by local representatives. These were mostly focused on religious sentiments¹⁶
- **3) Time constraint** due to the short and unique nature of the project, the time constraint was cited by all BRAC teams as a major issue. The data collection process lasted for one month and therefore did not cover a longitudinal analysis of the data.

3.4 Reviewing Challenges and Opportunities in the Communication Campaign

The data collection and analysis process alongside the communications campaign formed the twin pillars of this project; to extract the most value from either both are necessary in conjunction. As such, after reviewing the data collection and analysis process, a review of the communications campaign provides a link between the successes and challenges faced in both parts of the project.

1) Developing a targeted communications campaign using the gathered data

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¹⁵ FGDs with Rangpur, Chattogram, Manikganj respondents, SKs, AMs, BDCs – 21st to 27th January, 2021

¹⁶ KIIs with BDCs

A central aim of this project was to collect, analyze, and visualize data across 40 districts. The strength in the end result is the ability to inform policy, communications, and information dissemination in a targeted way. However, **after the data collection process, the communications campaign designed took a broad-strokes approach as opposed to a specific, targeted one.** Specifically, a broad-strokes approach runs the risk of reiterating known information to certain districts and populations, and missing essential information to populations prone to certain types of misinformation.

E.g. Sylhet and Kushtia have different populations, socioeconomic conditions, geographic displacement, and prevalence of different types of misinformation regarding COVID-19. However, the communications campaign developed for Sylhet and Kushtia are the same¹⁷.

Sylhet (Northeast of Bangladesh)
<25% Misinformation

VS. Kushtia (West of Bangladesh)
>35% Misinformation

Going forward, to fully leverage the strength of the tools and processes developed through this project, the policy discussions and subsequent communications campaigns should attempt to address the spread of misinformation using the district-wise data collected

2) Providing visual materials to SKs during the data information dissemination process

A few key findings to come out of the FGDs were the differences between reach and recall, and the identification of important channels of information dissemination. When reviewing these two findings in conjunction, a third finding was evident; providing visual materials to SKs (the most effective channel for information dissemination) to share with beneficiaries would induce greater recall of the information shared. This includes the following:

SL	Benefits of providing targeted visual materials for information dissemination
1	Designing visual communications materials is more effective for beneficiaries' uptake of information
2	Standardized visual information reduces inconsistency of information and reduces strain on SKs
3	Different materials prepared to combat different types of misinformation can help target that misinformation specifically

Table 7: Proposed benefits of supporting materials during surveying and information dissemination

3) Further leveraging digital media

Though the most effective channel for information dissemination was reportedly the on-the-ground SK team in terms of trust and recall, **the channel with the greatest reach remained the likes of TV and Facebook.** As such, these channels, alongside the SKs, should be considered and developed as an effective means to grow the reach of information.

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¹⁷ USAID, BRAC - Rumor Map, USAID Bangladesh Digital Ecosystem Activity

Television – Anecdotal evidence suggests that **most households in peri-urban areas (~75%) own or have access to television and cable¹⁸.** Moreover, survey respondents reported television as an important source of information. Importantly, television was used as a starting point of information; respondents reported hearing information through television and then discussing that information with friends and family, and to some extent with SKs.

Facebook – Further anecdotal information suggested that Facebook was a popular channel for the spread of any form of information among the young adult and adult population. While most respondents cited Facebook as an important channel for obtaining information, those same respondents reported being skeptical to that information. In comparison to television, **Facebook acted as a source of information but also provided a platform to discuss and verify that information**. Importantly, the **BRAC communications team has rightly identified Facebook as a channel worth developing**, and has formed a page to share and discuss relevant information regarding COVID-19¹⁹.

 $^{^{18}}$ FGDs with Rangpur, Chattogram, Manikganj respondents (N=16) – 21^{st} to 27^{th} January, 2021

¹⁹ KII with BDEA Chief of Party – 18th January, 2021

3.5 Comparison Across Regions²⁰

Area	Sampling Methodology	Interview Methodology	Communications Reach and Recall	Challenges from Local Leaders	Prevalent Rumors
Manikganj	Door-to-door data collection with no clear indication of randomization in the data collection plan	Did not strictly follow the prescribed methodology – some responses included whole households as opposed to a single respondent	4,236 responses reported over the course of one month. Respondents reported recalling door-to-door as the most effective form of communication	Early stage challenges included movement issues due to lockdown measures and lack of access to certain villages for fear of spreading COVID-19	 Fever, cough and breathing difficulty means being infected with COVID-19 If you rub alcohol or chlorine on your whole body the COVID-19 virus will die Children cannot contract COVID-19
Rangpur	Door-to-door data collection with no clear indication of randomization in the data collection plan	Did not strictly follow the prescribed methodology – some responses included whole households as opposed to a single respondent	10,711 responses reported over the course of one month. Respondents reported recalling door-to-door and TV campaigns information over other communications	Early stage challenges included movement issues due to lockdown measures. Local leaders posed some questions as to the intention of the data collection, but did not stop the process	 Fever, cough and breathing difficulty means being infected with COVID-19 If you rub alcohol or chlorine on your whole body the COVID-19 virus will die You can receive medical care and consultation for COVID-19 even without going to the hospital
Jashore	Door-to-door data collection. Surveying 1 in 10 houses in a given locality. No clear indication of randomization.	Did not strictly follow the prescribed methodology – some respondents were allowed to input data on their own	7,160 responses reported over the course of one month. Respondents reported recalling door-to-door communications as the most effective form of communication	Early stage challenges included movement issues due to lockdown measures and lack of access to certain villages. No issues were reported during the later stages of collection	 Fever, cough and breathing difficulty means being infected with COVID-19 If you rub alcohol or chlorine on your whole body the COVID-19 virus will die You can receive medical care and consultation for COVID-19 even without going to the hospital
Chattogram	Door-to-door data collection with no clear indication of randomization in the data collection plan	Followed the prescribed method – including asking and recording which of the rumors the respondent had heard	13,104 responses reported over the course of one month. Door-to-door and miking were reported as the most effective forms of communication	Early stage challenges included movement issues due to lockdown measures and lack of access to certain villages	 Fever, cough and breathing difficulty means being infected with COVID-19 If you rub alcohol or chlorine on your whole body the COVID-19 virus will die You can receive medical care and consultation for COVID-19 even without going to the hospital

 $^{^{20}}$ FGDs with Rangpur, Chattogram, Manikganj respondents, SKs, AMs, BDCs - 21st to 27th January, 2021

3.6 Methodology Effect on Findings

The various assumptions discussed in $\underline{\text{section 3.1}}$ were split into two categories, access and data. Below we discuss those assumptions and their potential to skew the findings.

	Assumption	Effect on Findings	Potential Bias
Access	SKs will be able to access the designated localities	The BDC, AM, SK teams reported few issues with accessing the areas they wished to study. No bias in sampling.	X
Access	Respondents will trust SKs	The respondents reported trusting SKs with the information they divulged and received. No bias in non-disclosure.	X
	Assumption	Effect on Findings	Potential Bias
	SKs are not enumerators	The SKs followed varying methods of data collection resulting in a potential for bias. Some SKs filled out one form for the entire household, while others filled out surveys w/o performing an interview	~
Data	The survey captures relevant contextual data	While demographic information had been collected, important contextual information was not collected; psychographic, hearing vs. believing, proneness to belief, prevalent channels of information	~
	The samples are representative of the larger area in question	A sample size of 10% or up to 1000 is recommended to be able to draw appropriate inferences. Each district surveyed had above at least 2000 respondents	×
		A random sampling method was not clearly defined which may have led to some bias, particularly overrepresentation of certain groups in a given area	~

Table 8: Assessing the assumptions' and methodologies' effect on findings and their potential for bias

3.7 Case Studies from the Field

Case Study: New Storm at the Bay – COVID 19 Vaccination Rumors

Data from the fields are indicating that rumors regarding COVID-19 vaccine are about to spread like a wildfire as people have already started to make assumptions based on the very little information that is available to them. COVID-19 vaccine has severe side-effects and might be lethal – this is one of the core rumors circulating within the communities.

Popular Rumors: During one of the FGD sessions, a health worker/shastho kormi (SK) mentioned that a local BRAC beneficiary refused to vaccinate her newborn child against Polio. Upon further investigation, it was found out that the mother believed that Polio vaccine contained the COVID-19 vaccine which might lead to her child's death. The same SK also informed that the rate of vaccination in newborns has gone down significantly since these rumors started. This finding can be further confirmed by the Director General for Health Service (DGHS)'s Expanded Program on Immunization (EPI) program data.

One respondent proactively shared with the team that people in her area believe that the recent fire in Serum Institute of India has reduced the effectiveness of the COVID-19 vaccines they were producing. Therefore, India supplied 20 lakh vaccine doses for free to Bangladesh as they could not sell those quality-compromised vaccines to the rest of the world.

Rumor Source and Spreading Pattern: When asked about the sources of the rumors, no respondent could point out to a direct digital source. Almost everyone reported word-of-mouth to be the source of these kind of news. While most of the respondents from each locality have reported that they do not have a social media account, almost half of them said that someone in their family had one. A general conclusion can be drawn that rumors are maybe first released through social media but the spreading is mostly carried out by the people.

4. Gaps and Recommendations

4.1 Organizational and Operational Challenges/Recommendations

A few significant challenges to data collection and information dissemination are the training, deployment and oversight of the entire process. The following two points address the ways in which the project could benefit from developing those components to improve data quality and oversight measures.

Training and deployment

A key strength throughout the project was the ability to leverage the vast on-the-ground network at BRACs disposal. For each major group within the on-the-ground network (BDCs, AMs, SKs), some considerations can improve the effectiveness of the training.

Considerations for BDCs – as the coordinators between the conceptualization and implementation teams, **the BDCs should have a clear understanding of the intended outcomes of the project.** The chief priority in this regard is to ensure BDCs have access to the aggregated data, dashboard, and receive constant communication regarding the methodologies of data collection and the intended outcome of the project.

1) It is essential that BDCs have access to the dashboard to review the data collected and how it is being used.

 Anecdotal evidence suggests that BDCs did not have access to the dashboard once the data had been collected, cleaned and analyzed²¹. This lack of access has the potential to create a disconnect between the methodologies employed for data collection and the intended outcome of the data collection process (as was observed).

2) BDCs should have constant communication with the Communications, Health, Data and other BDC teams.

• This can help to ensure standardized methodologies are used and only relevant information is being disseminated within their jurisdiction.

Considerations for AMs – as the teams directly coordinating between the BDCs and those engaged in data collection, the AMs should have a clear understanding of the methodologies for data collection and analysis and a clear idea of the intended outcome of the project. To achieve this, their training should be geared towards providing best practices for data collection (through a statistical lens).

1) AMs should have training regarding mass data collection best practices

- To avoid statistical errors the AMs in charge of coordinating the data collection process should be aware of the potentials biases that may result from improper data collection practices, these include:
 - i. Training for sampling (i.e. how to ensure random sampling)
 - ii. Standardized practices for correcting erroneous or missing data
 - iii. Identifying and maintaining control variables

²¹ FGDs with Rangpur, Chattogram, Manikganj respondents, SKs, AMs, BDCs – 21st to 27th January, 2021

2) AMs should be provided with training relevant to identifying data quality issues (sampling and data collection errors)

- To be able to identify where data is being erroneously collected or inputted, the AMs overseeing SKs should be aware of signs of the following:
 - i. **Biased sampling** avoid by defining target populations and sampling within those groups according to share of total population within a given area.
 - ii. **Data collection errors** avoid by cross referencing using the oversight measures put in place. Specific training for this is required for AMs.

3) Considerations for SKs – acting as enumerators in this project, the SKs engaged in data collection and dissemination should receive training in the following key area:

- Maintaining best practices in data collection, recording and questioning best practices in
 the questioning methodology should be stressed during the training phase for SKs. A significant
 potential for bias occurs when those collecting data do not follow a standardized questioning
 methodology. Some considerations in this regard include:
 - i. Avoid rephrasing the question
 - ii. Avoid sharing personal anecdotes
 - iii. Avoid suggesting answers
 - iv. Avoid detailed discussion with the respondents

Data collection oversight

To address the early stage concerns the BRAC team observed with regard to data quality, errors, and data collection oversight, an oversight procedure was developed. This included recording the details of the SK collecting data, and including a survey-conducted date, an upload status, and an adjustment date. This data allowed supervisors such as BDCs and AMs to cross reference the data being collected and inputted into the database. As has been discussed in point 2 of section 3.3, prior to this oversight procedure, there was a small portion of data being falsely inputted into the database. To develop this oversight procedure further, a few considerations are necessary:

1) Develop a dedicated monitoring and evaluation team for data collection

- i. This should be formed, in large part, by the BDCs and AMs
- ii. Perform cross-checks at random intervals during the data collection process

2) Tie incentives to data quality and efficiency as opposed to pure data collection

 The sample sizes for each district were typically larger than 1,000 (the recommended maximum to avoid sampling bias). As such, there is room to reduce data collected to ensure data quality.

3) Flag and address inconsistent data collection practices

- i. Hold periodic sessions to hear and address the issues data collectors face on the ground to ensure inconsistencies are addressed more often.
- ii. Perform interim training sessions during data collection to review and reinforce best practices

4.2 Addressing Gaps in Data Collection and Analysis

Among the several challenges observed in the data collection and analysis process, two key areas provide the greatest opportunity to improve upon. These are as follows:

Capturing contextual data

Capturing data surrounding the central issue in developing a holistic view and approach of that issue. Furthermore, a few important analyses using contextual data have the potential to add greatly to the value of the digital ecosystem activity. However, in order to perform these analyses, it is necessary to gather that contextual data. These proposed analyses are as follows:

- 1) Segmentation of misinformation by demographics as a start, the BRAC team has collected demographic data corresponding directly to their survey responses. As such, a breakdown of demographic and consequent analyses can be performed using existing data and resources. Some possible demographic analyses include:
 - i. Prevalence of misinformation among the youth, young adult, adult, and elderly populations
 - ii. Gender based differences in misinformation
 - iii. Psychographic analysis for exposure and proneness to misinformation
- **2) Gauging prevalence of misinformation per channels and given demographic groups** the greatest potential for policy-level value addition comes through the identification of wide-reaching and influential channels of information. As such, it is necessary that a survey mapping misinformation in Bangladesh identifies which channels are prevalent at various levels. Two considerations are important in developing this further:
 - Integration of information channel-related questions in the questionnaire/during the survey
 - Where did you hear this information?
 - What is your go to source of information regarding health, business, policy, etc.?
 - Which sources of information do you trust most?
 - ii. **Segmenting information channels by demographic groups** it is important to break down the prevalence of different channels of information by the demographic groups that consume those given channels. This is important in one key way; it helps develop targeted communications based on channel and demographic group using those channels.

Longitudinal data collection

A key consideration to sustain and develop the digital ecosystem activity going forward is the inclusion of a longitudinal aspect of the data collection and analysis. Specifically, this can occur in two ways:

- 1) Baseline vs. end-line study this type of study refers to a comparative study in which there is a clear before and after study. This consists of one study at the beginning and another study after the effect has (presumably) passed.
 - In the context of this study, the baseline study would include the data already collected and the end-line study would be prior to mass rollout of the vaccine. Specifically, **this will provide a**

comparative analysis of COVID-19 misinformation during the pandemic at two different points; in the midst of it vs. nearing its end.

- 2) Periodic/time-series study this type of study refers to a constant collection, update, and analysis of misinformation regarding COVID-19. This would require more frequent periodic mobilization of data collectors.
 - Importantly, this approach would provide greater flexibility in policy design, more targeted communications, and more frequent monitoring of misinformation. However, the drawback would be the greater commitment to data collection and the associated resources.

Case Study: Geopoll's Baseline and End Line Survey

Evaluating Indonesian Adult Population's Exposure to Misinformation

As part of an USAID funded project, Geopoll devised a comprehensive survey instrument in affiliation with the University of Notre Dame to evaluate the Indonesian adult population's access to traditional and social media; and consequently, assess their exposure to fake news. 1000 computer-assisted telephone interviews were conducted between March 27- April 24, 2019 and February 25-March 21, 2020, for the baseline and end line surveys, respectively.

- a. Methodology: Prior to data collection, team-members were trained on standard CATI best practices comprising of research ethics, participant refusals, questionnaire design, practice interviews and short scale pre-tests. The probability sampling frame was randomised by using a random digit dialling (RDD) approach, from an aggregated of mobile subscriber directory in Indonesia. All 34 provinces in Indonesia were represented proportionately. To comprehend how information spreads, social media account usage was used to observe how local and global news is read and watched. To measure misinformation dissemination, social media users were attributed focus and questioned on how often they read full news stories before sharing with others. In addition, respondents were asked to judge a random module of headlines classifying real, misleading and misinformation news stories, to assess their capacity of validating news stories they encounter.
- **b. The Results Observed:** Less than one-third of the respondents utilized Whatsapp to read and watch news and events, suggesting news content is not as widely disseminated on WhatsApp compared to other social media platforms. 80% of respondents regularly utilized social media and 70% admitted to sharing news stories without always reading the full article, albeit it fell to 54% in the second round. Only 3-4% indicated they intentionally share news stories classified as false, suggesting that spread of misinformation is mainly unpremeditated. More importantly, the random headline model revealed that misinformation news stories are considered more accurate, opposed to real stories.

Link: https://www.geopoll.com/misinformation-indonesia/

4.3 Way Forward

Adapting the tools developed to fit future needs (vaccine rollout)

The greatest strength in the data collected, data tree, and rumor map is the ability to adapt it to fit various needs. A foreseeable need in the immediate future is the rollout of the COVID-19 vaccine and the associated rumors, misinformation and policy considerations. This concern has been rightly identified as one for which the data tree and rumor map are uniquely equipped²². To fully utilize the strengths of the project thus far, the following considerations are worth exploring:

SL	Proposed Activity	Specific Considerations
		Target prevalent rumors, misinformation, news surrounding the vaccine
1	Begin development of a COVID-19 vaccine misinformation survey/questionnaire	Distinguish between hearing and believing
		Identify important channels for information dissemination
2	Develop tentative analytical tools and processes to analyze and visualize the data	Adapt the rumor map algorithm to the expected misinformation surrounding the vaccine rollout
3	Create a new platform to store, access, analyze, and visualize the data	Develop a new database and website for the incoming data
4		Include a baseline vs. end-line study approach to perform comparative analyses
- 4 -	Begin training and deployment of data collectors	Leverage the BRAC network already engaged in the digital ecosystem activity

Table 9: Proposed activities to adapt the existing tools and processes to the upcoming challenges regarding the vaccine rollout

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 $^{^{22}}$ CW with representatives from BRAC, USAID, BDRC, LICT, Jeeon, Robi Axiata, UN Women, UNDP, Grameen Phone, BBC Media Action – 18^{th} January, 2021

Developing targeted communications campaigns per target audience

From the onset of the project, a major strength of the rumor map was the ability to visualize the collected data and produce data-driven policy and communications decisions. In this regard, a particularly effective use of that data and visualization is to **develop and deploy targeted communications** campaign by district or demographic group, addressing specific instances or types of misinformation. To achieve this, a few data points and analyses are worth exploring:

1) Communications and policy considerations with respect to gender-based differences

- i. Identify and address prevalence of various channels among different genders
- ii. Identify and address differences in belief or susceptibility to misinformation

2) Communications and policy considerations with respect to age-based differences

- i. Identify prevalence of digital channels and leverage them to reach the youth
- ii. Identify effective channels to reach adult and elderly populations
- iii. Identify and develop communications around differences in belief among the various age groups

3) Communications and policy considerations with respect to urban vs. rural differences

- i. Identify, develop and utilize various channels among urban and rural populations
- ii. Identify and address misinformation within occupational classes (i.e. industrial vs. agricultural economy differences)

Further leveraging digital media

The channels with the greatest potential for reach are digital. These include, but are not limited to, Television, Facebook, YouTube and Twitter. With growing access to electricity, televisions have increasingly popped up in rural/peri-urban households²³. To reach the youth and urban populations, the latter four channels mentioned above are particularly effective.

High Impact

Mid Impact

Future



Television is a particularly effective channel for information dissemination in rural and peri-urban populations/households. Specifically, information disseminated through the TV is reported to be more believable (as per respondents' opinion).



Facebook offers two unique and effective benefits; 1) it has a wide and consistent reach, 2) it offers a platform to share and discuss information. Through a dedicated page, it can be leveraged to both disseminate and moderate trustworthy information.



YouTube offers a highly engaging platform, with great reach and greater potential for information recall. Moreover, leveraging the existing network of content creators on the platform can aid in developing the platform's potential for information dissemination.



Twitter provides the ability to keep users and viewers update with instant information and quick updates regarding misinformation. Furthermore, it provides a platform to track prevalent misconceptions and misinformation making rounds on the internet.

²³ FGDs with Rangpur, Chattogram, Manikganj respondents, SKs, AMs, BDCs – 21st to 27th January, 2021

Case Study: Rural Leaders as the Face of Awareness Campaigns (Afghanistan)

Dispelling Misinformation & Promoting Precautionary Measures

The Afghanistan government deployed two leading development programs: The Citizen's Charter and the Women's Economic Empowerment- Rural Development Project (WEE-RDP) to launch public awareness campaigns, targeted at rural Afghani provinces, to constraint the proliferation of the COVID-19 virus. The Independent Directorate of Local Governance backstopped the campaigns which successfully reached 12,000 communities, across 124 districts. The campaigns leveraged on the influence of rural leaders to promote societal behavior change, conductive to controlling COVID-19.

- a. Utilizing Local Leaders as Communication Channels: The Citizen's Charter conducted small-scale meetings and local public awareness sessions for Council members and Mullahs (a Muslim learned in Islamic theology and sacred law). The participating village leaders in turn shared this information within their communities, in small gatherings, maintaining strict social distancing guidelines. The Mullahs further circulated the message through mosque loudspeakers, ensuring reach to all residents. Additionally, the WEE-RDP sent female staff to individual homes and villages to deliver prevention advice, especially focusing on residents with no access to media. Women canvassers reached over 4000 groups in rural provinces, even utilizing video messages to raise awareness about hygiene and health.
- **b.** The Impact Created: The campaigns encouraged rural residents to wash hands frequently, utilize antiseptics, practice social distancing, wear masks in public and avoid densely packed spaces. Council members disinfected mosques, delivered sanitation packages, and created awareness about self-quarantine. The campaigns also created cognizance regarding the shortage of masks, stimulating the production of masks by a cohort of local rural women for distribution within their communities. Enterprise groups also engaged in mask production and provision at affordable prices.

Link: https://www.worldbank.org/en/news/feature/2020/06/28/awareness-campaigns-help-prevent-against-covid-19-in-afghanistan

4.4 Recommendations at a Glance

Broad Issue	Recommendation	Rationale	Impact	
Training and deployment	BDCs should have access to the dashboard and have constant contact with the communications, health, data and BDC teams AMs should have training regarding mass data collection best practices and identifying data quality issues SKs should have training regarding best practices in	Training for each of the on-the- ground teams should focus on the connection between intention and data collection methods; this is to ensure best practices in data collection are used and the central aim of the project is kept a key priority	Reduces the disconnect between data collection and the intention of the project Reduces data collection, quality, and inconsistency errors	
B : " "	data collection, recording and questioning	. ,		
Data collection oversight	Develop a dedicated monitoring and evaluation team for data collection; leverage the existing BDCs and AMs in this endeavor	Evidence on the ground suggested that there were some data quality issues and lack of oversight during the early stage of the study. The chief concern was false reporting.	Developing a dedicated team to monitor the data collection teams and tying their incentives to the data quality reduces issues of false reporting and improves oversight	
	Tie incentives to data quality and efficiency as opposed to pure data collected	chief concern was raise reporting.	capacity. Holding periodic review sessions provides an opportunity to reinforce best practices for data	
	Hold periodic review and training sessions		collection and oversight	
Capturing contextual data	Capture data to segment misinformation by demographics	Allows analyses such as; prevalence of misinformation among various age groups, gender-based differences in misinformation, psychographic analyses for exposure and proneness to misinformation	Allows various in-depth analyses to further improve data-driven policy and communications decisions	
	Gauge prevalence of misinformation by channels and demographic groups	Allows an in-depth analysis of the prevalent, relevant and effective channels for information dissemination		
Longitudinal data collection	Perform a baseline vs. end-line study	A before and after analysis of COVID- 19 related misinformation provides an opportunity to gauge the effectiveness of relevant communications campaigns or public policy decisions	Allows a before and after analysis of the project based on various controls:	

Longitudinal data collection	Periodic/time-series study	A longitudinal study with frequent periods of review produces a clearer picture of how information is developing and responding to various stimuli (i.e. communications campaigns, policy, etc.)	e.g. before and after the communications campaign to assess effectiveness e.g. assess how the misinformation is developing over a periodic timescale
Adapting the existing tools to fit future needs Vaccine-related misinformation	 Plan and develop the following four steps: a. Begin development of a COVID-19 vaccine misinformation questionnaire b. Develop tentative analytical tools and processes to analyze and visualize the data c. Create a new platform to store, access, analyze and visualize the data d. Begin training and deployment of data collectors 	As the BRAC team, along with several other NGOs, private organizations, and policy thinkers have rightly identified; the next wave of misinformation will be surrounding the vaccine and its rollout. As such, developing the approach to that project is imperative at an early stage.	Develop a plan at an early stage to ensure the training, development and implementation are effectively addressed down the line
Developing targeted communications campaigns	communications and policy considerations with respect to gender-based differences and policy design is a central strength of this project. Using the	Identify prevalence of various channels among different genders Identify differences in belief or susceptibility to misinformation Identify prevalence of digital channels and leverage them to reach the youth	
	Communications and policy considerations with respect to age-based differences		Identify effective channels to reach adult and elderly populations Develop communications around differences in belief among age groups
	Communications and policy considerations with respect to urban vs. rural differences		Identify, various channels among urban and rural populations Identify and address misinformation within occupational classes

Further leveraging digital media	Develop further communications through television; specifically targeting rural, peri-urban and middle-class populations	Television is a particularly effective channel for information dissemination in rural and peri-urban populations/households. Specifically, information disseminated through the TV is reported to be more believable (as per respondents' opinion).	Leverage a trusted and wide- reaching channel especially among the rural, peri-urban and middle- class populations
	Develop Facebook, YouTube and Twitter as core information dissemination channels	The vast and consistent reach of these channels can be leveraged effectively in two ways: 1. Create and develop hubs for information in different areas (misinformation regarding COVID-19, vaccines, etc.) 2. Provide a platform to discuss various topics and information as well as moderate that discussion or information	Creating and developing these platforms as key information dissemination channels provides the opportunity to share information frequently and to a wide audience, and provides the opportunity to moderate any content or discussion on the platform.

5. Appendix

Appendix A: Secondary Materials

- 1. Survey Questionnaire https://drive.google.com/file/d/1ZpmntqbCs1Pm16jFKeGaFsRxVQG-0lQX/view?usp=sharing
- 2. BDEA Application User Manual for SKs https://drive.google.com/file/d/1J zdWrNGKQgAwK48zVmGMIRYcbmXZX5T/view?usp=sharing
- 3. BDEA Application User Manual for SK Reporting https://drive.google.com/file/d/1EjrhueAJxSpT5G1IBIYPzI3bda3DC P0/view?usp=sharing
- 4. BDEA Application User Manual for BDCs https://drive.google.com/file/d/1 TG5KUUHgGxQqlewU-q9EHZD9YSGdHj4/view?usp=sharing
- 5. USAID BDEA Data Analysis Plan https://drive.google.com/file/d/1GGHQiGFeeAGY56WbEBaMxBWQjeM53KwJ/view?usp=sharing
- 6. USAID BDEA MEL Plan https://drive.google.com/file/d/1ABgWPGWsW3-9xwyL75YPTCnaO1lkYb z/view?usp=sharing
- 7. BDEA Brief https://drive.google.com/file/d/1IwmyQUFs7HLDR3Vwx2tRk4RkQ-zfskUH/view?usp=sharing
- 8. BDEA Quarter 1 Report https://drive.google.com/file/d/1EZTZHIABzdXDjpf3mXYBiOAn17s7hB r/view?usp=sharing
- 9. Various COVID-19 Information:
- 10. Types, Sources, and Claims of COVID-19 Misinformation https://drive.google.com/file/d/1SIf691T36eDTlu8J6SOpFYWBWNQex 5x/view?usp=sharing
- 11. Social Stigma Associated with COVID-19 https://drive.google.com/file/d/1UdD3Y7ErxtcVjfrJ7D1knuwJjjeiYsEH/view?usp=sharing
- 12. USAID-BRAC BDEA Factsheet https://drive.google.com/file/d/18EQ6q2qkkysU1t9mprSKeKi6fO90WjdY/view?usp=sharing

Appendix B: Data Tree Structure

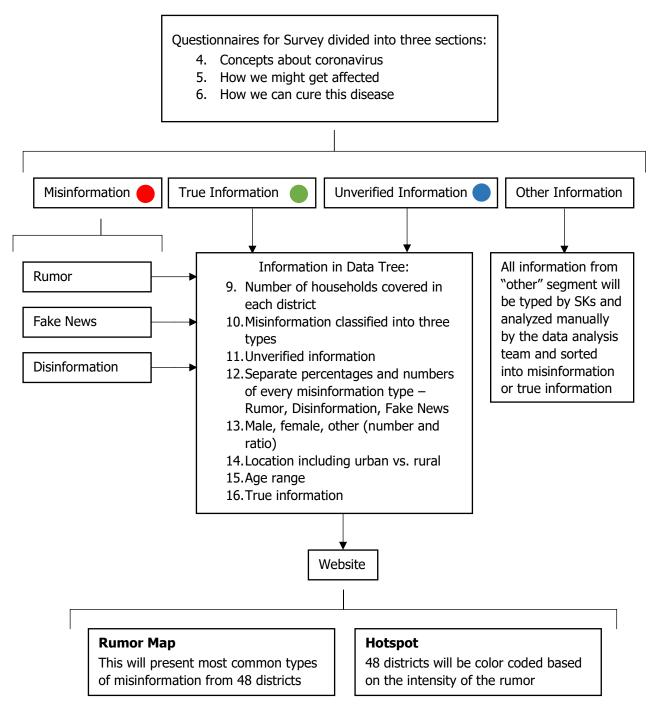


Figure 5: Data analysis plan and highlighting of the Data Tree – a key tool in developing the rumor map

Appendix C: Rumor Map Structure

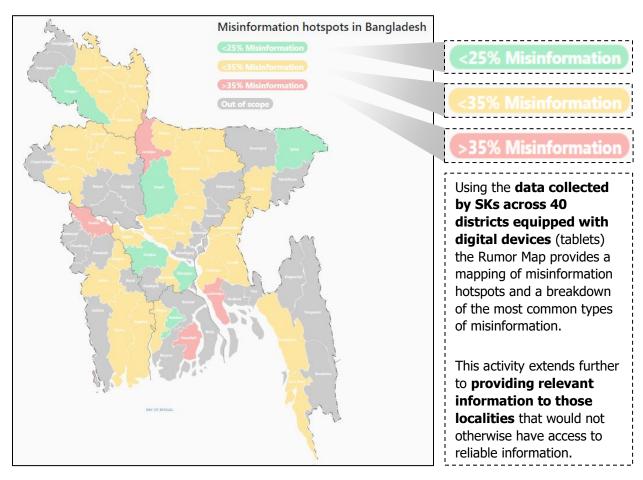


Figure 6: USAID-BRAC Rumor Map - Mapping COVID-19 Misinformation in Bangladesh

Appendix E: Key Informant Interview/Focus Group Discussion/Consultative Workshop List

	Key Informant Interview List			
SL	Name	Designation		
1	Mehran Khan	Chief of Party		
2	Tahjib Shamsuddin	Program Manager		
3	Ayesha Haque	Communications Team Lead		
4	Tanzim Walid Rahman	Campaign manager/lead		
5	Sohely Rahman	Health Team Lead		
6	S. M. Tahsin Rahaman	Monitoring Team Lead		
7	Hafizur Rahman	BDC Team Lead		
8	Akram Haider	Data Team Lead		
9	M.M. Arafat Hossain	Technology Team Lead		
10	Moutushi Kabir	Director, Communications, Learning and Leadership Development, BRAC		
11	Shahriar Hoque BCompSc, MBA, P2P, FICB	Associate Director, Technology Division		
12	Abdullah Akbar	Agreement Officer USAID		
13	Shaheena Sultana	Agreement Officers' Representative USAID		

	Consultative Workshop List (BRAC and USAID Team)			
SL	Name	Designation		
1	Shaheena Sultana	USAID representative		
2	Sohely Rahman	Health team representative		
3	Tanzim Walid Rahman	Communications team lead		
4	Mehran Khan	Chief of party		
5	Tahjib Shamsuddin	Program manager		
6	Akram Haider	Data team lead		
7	S. M. Tahsin Rahaman	Monitoring and Evaluation team lead		
8	Abu Said Md Juel Miah	Policy Advisor		

	Focus Group Discussion List			
SL	Designation	Number of Representati ve	Districts	
1	Area Manager	1	Chittagong	
2	BDC	1	Manikganj	
3	Respondent	4	Rangpur	
4	Sastho Kormi (SK)	2	Jashore	

Appendix F: Key Informant Interview/Focus Group Discussion/Consultative Workshop Guideline

	Key Informant Interview Guideline			
SI.	Team	Question	Rationale	
1		Can you briefly explain the Data Tree concept and structure?	To understand the tools developed	
2		How was the Rumor Map developed from the Data Tree and what was its intended use?	To understand the tools developed	
3	Technology	What were some challenges in developing these structures/tools?	To understand the technological challenges both for the BRAC team and with regard to technological challenges in collecting data in Bangladesh	
4		What were the key takeaways from developing, implementing and using these structures/tools?	To understand the positive outcomes of the tools developed	
5		What challenges did you expect to face in the data collection and recording process?	To understand the BRAC team's thought process regarding expected challenges in collecting and recording data in Bangladesh across various districts and locales	
6	BDC	What questions/approaches made people reluctant to share information? Did you notice stigma associated with any condition or information?	To understand peoples' reservations in sharing data	
7		What challenges did you face in data collection and recording? What did the team do to address these challenges?	To understand the challenges faced on- the-ground with regard to data collection and recording	
8		Share some methodologies and channels that worked well for data collection and recording	To understand the positive outcomes of the data collection process	
9	Health	What were some prevalent misconceptions and rumors with regard to COVID-19?	To understand the findings with regard to COVID-19 information	

1 1			
10		How did misinformation change between rural, peri-urban and urban areas? Was there a discrepancy between these areas?	To understand the geographic/socioeconomic differences in spread of misinformation
11		Which channels of information were people most responsive to? Government offices, NGOs, private companies/employers, news, health clinics/hospitals?	To understand various channel response and effectiveness
12		Which channels of information were people most responsive to? Government offices, NGOs, private companies/employers, news, health clinics/hospitals?	-
		Which channels were responsible for the spread of misinformation regarding COVID-19?	To understand which channels should be addressed to effectively reduce spread of misinformation
13	Communication	How have the tools developed helped minimize the spread of misinformation or allowed you to disseminate information in specific areas with greater misinformation? Can you share some examples?	To understand the use cases of the tools developed (data tree, rumor map)
14		What are some recommendations for creating or improving channels to spread COVID-19 (or general health) information?	To understand the recommendations for better implementation of the tools developed along with possible collaborations/partnerships to make these tools more effective
15		How can the government use these tools to better understand health information and disseminate necessary information?	To understand how this program can be scaled up and how the government can use or help this program
16		What were some challenges in oversight and reporting?	To understand team management, reporting and compliance challenges
17	M&E	What were the dependencies between teams and how were the teams structured to complement each other?	To understand team dependencies and structures
18		What is the importance of data in rumor mapping and disseminating COVID-19 information?	Ice-breaking questions
		What are some of the insights you have gotten throughout this project?	Ice-breaking questions
	General	What is needed to sustain the tools, methods and communications developed for this activity?	To understand the steps required to sustain or scale up this program
19		What are the takeaways and challenges identified while sharing the project outcomes and knowledge documents and influencing relevant government agencies?	To understand the outcomes of the program and how it may help policy, government approach or sustaining the program going forward

	Focus Group Discussion Guideline			
SI.	Focus Group	Question	Rationale	
1		What challenges did you expect to face in the data collection and recording process?		
2		What were some strategies developed to address these expected challenges?	Understanding the planning stage and what the expectations were	
3		How relevant and/or effective were they in addressing those challenges?		
4		How effective/applicable were the supporting material shared by the USAID team?	Reviewing secondary material and their effectiveness	
5		What new challenges did you face that were not expected?	Understanding the challenges faced	
6		How did you adapt to address these new challenges?	on the ground that weren't accounted for and how the teams adapted to	
7		How did the other BRAC teams support you in addressing these new challenges?	address them	
8	BDC/SK	What channels were people in various districts and localities more responsive to?	Understanding the different channels and their effectiveness in disseminating COVID-19 information effectively and efficiently	
9		What challenges did you face on the ground?		
10		Were respondents reluctant to share information or engage with you? If so, what made them reluctant? Why?		
11		Did you receive support from local authorities/leaders, govt. officials, other NGOs, local population, etc? (BDC)		
12		Were the tabs easy to use? Was the training sufficient to use them effectively? (SK)		
13		What was the quality of the information you received? Were there any discrepancies either in social or technological aspects?		
14		What patterns, insights, or takeaways can you share with us?		
15		What are some recommendations to improve the data collection process?	Gathering insights from personnel on the ground	
16		Were you reluctant to share information with the SKs? What made you feel reluctant?		
17	Respondents	What channels of information were most relevant/reliable to you? Facebook, TV, Other Online, Friends and Family, BRAC/SKs?		
18		What sort of information and materials did the BRAC teams/SKs share with you? How helpful		

	Consultative Workshop Guideline			
SI.	Team	Activity	Rationale	
1		Please mention some of the useful tools that can be used to capture rumor data?	To understand the tools developed	
2	Technology	What were some challenges in developing these structures/tools?	To understand the technological challenges both for the BRAC team and with regard to technological challenges in collecting data in Bangladesh	
3		Please mention some key considerations while developing and implementing these structures/tools?	To understand the key features of the tools	
4		What questions/approaches usually make people reluctant to share information? Do you think there might be any stigma associated with any condition or information?	To understand peoples' reservations in sharing data	
5	Data	What challenges one might face in data collection and recording? What can the data collection team do to address these challenges?	To understand the challenges faced on- the-ground with regard to data collection and recording	
6		Please share some methodologies and channels that typically work well for data collection and recording for similar projects	To understand the positive outcomes of the data collection process	
7		What are some prevalent misconceptions and rumors with regard to COVID-19?	To understand the findings with regard to COVID-19 information	
8	Health	Is there usually any discrepancy in pattern of misinformation in urban, peri-urban and rural areas?	To understand the geographic/socioeconomic differences in spread of misinformation	
9		Which channels of information are people most responsive to? Government offices, NGOs, private companies/employers, news, health clinics/hospitals?	To understand various channel response and effectiveness	
10	Communication	Which channels of information are people most responsive to? Government offices, NGOs, private companies/employers, news, health clinics/hospitals?	-	
11		Typically which channels are the most responsible for the spread of misinformation regarding COVID-19?	To understand which channels should be addressed to effectively reduce spread of misinformation	

12		What are some recommendations for creating or improving channels to spread COVID-19 (or general health) information?	To understand the recommendations for better implementation of the tools developed along with possible collaborations/partnerships to make these tools more effective
13		How can the government use these tools to better understand health information and disseminate necessary information?	To understand how this program can be scaled up and how the government can use or help this program
14		What is the importance of data in rumor mapping and disseminating COVID-19 information?	Ice-breaking questions
15	General	Please mentions some potential challenges while sharing the project outcomes and knowledge documents and influencing relevant government agencies?	To understand the outcomes of the program and how it may help policy, government approach or sustaining the program going forward